# Montana Board of Oil and Gas Conservation
# Environmental Assessment

**Operator:** Slawson Exploration Company, Inc.
**Well Name/Number:** Cutlass No. 1-36H
**Location:** NW NW Section 36 T28N R59E
**County:** Roosevelt **, MT; Field (or Wildcat)** Wildcat

## Air Quality

(possible concerns)
Long drilling time: No, 25-35 days drilling time.
Unusually deep drilling (high horsepower rig): Triple derrick rig 1000 HP to go to 14,399'MD/10,473 'TVD.
Possible H2S gas production: Slight
In/near Class I air quality area: No Class I air quality area.
Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under rule 75-2-211.

Mitigation:
_X Air quality permit (AQB review)
___ Gas plants/pipelines available for sour gas
__ Special equipment/procedures requirements
__ Other:_____
Comments:

## Water Quality

(possible concerns)
Salt/oil based mud: Yes to intermediate casing string hole to be drilled with oil based invert drilling fluids. Horizontal lateral will be drilled with oil based invert drilling fluids. Surface casing hole to be drilled with freshwater and freshwater mud.
High water table: High water table possible.
Surface drainage leads to live water: No, closest drainage is an unnamed ephemeral tributary drainage to Little Muddy Creek, about 1/8 of a mile to the east from this location.
Water well contamination: No, nearby water wells are shallow in depth, about 460' to 20'. Closest water wells are about ¼ of a mile to ½ of a mile from this location. Surface casing will be drilled with freshwater to 2000' and steel casing set at 2000' and cemented back to surface.
Porous/permeable soils: Yes, sandy silty clay soils.
Class I stream drainage No, Class I stream drainages.

Mitigation:
X Lined reserve pit
X Adequate surface casing
__ Berms/dykes, re-routed drainage
_-_ Closed mud system
__ Off-site disposal of solids/liquids (in approved facility)
__ Other: _____.
Comments: 2000' of surface casing will be set well below freshwater zones in adjacent water wells. Also, covering Base of the Fox Hills aquifer. Surface hole will be drilled with freshwater and freshwater muds to 2000'+. Steel surface casing will be run and cemented to surface from 2000'.

## Soils/Vegetation/Land Use

(possible concerns)
Steam crossings: None anticipated.

High erosion potential: No, location will require a moderate cut, up to 24.8' and moderate fill, up to 28.2', required.
Loss of soil productivity: Slight, location to be restored after drilling well if well is nonproductive. If productive unused portion of wellsite will be reclaimed.
Unusually large wellsite: No, location is a large wellsite, 450'X400' in size.
Damage to improvements: Slight, surface use is grassland.
Conflict with existing land use/values: Slight

Mitigation
__ Avoid improvements (topographic tolerance)
__ Exception location requested
X Stockpile topsoil
__ Stream Crossing Permit (other agency review)
X Reclaim unused part of wellsite if productive
__ Special construction methods to enhance reclamation
X Other: Requires DEQ General Permit for Storm Water Discharge Associated with Construction Activity, under ARM 17.30.1102(28).

Comments: Access will be over State Highway #2 . About 1,252' of new access road will be built off the existing State Highway #2 into this location. Oil based drilling fluids will be recycled. Oil based drill cuttings will be buried in the lined reserve pit. Completion pit fluids will be hauled to a permitted Class II saltwater disposal. No concerns.

**Health Hazards/Noise**

(possible concerns)
Proximity to public facilities/residences: Residences about 3/8 of a mile to the southwest from this location. Stateline bar is 3/8 of a mile to the southeast from this location.
Possibility of H2S: Slight to none.
Size of rig/length of drilling time: Triple drilling rig 25 to 35 days drilling time.

Mitigation:
X Proper BOP equipment
__ Topographic sound barriers
__ H2S contingency and/or evacuation plan
__ Special equipment/procedures requirements
__ Other:_____

Comments: Adequate surface casing cemented to surface with working BOP stack should mitigate any problems. Noise should not be a problems, sufficient distance from residence to rig should mitigate this.

**Wildlife/recreation**

(possible concerns)
Proximity to sensitive wildlife areas (DFWP identified): None identified in the area.
Proximity to recreation sites: None identified in the area.
Creation of new access to wildlife habitat: None
Conflict with game range/refuge management: None
Threatened or endangered Species: Listed threatened or endangered species are Pallid Sturgeon, Piping Plover, Interior Lease Tern and Whooping Crane.
Mitigation:

__ Avoidance (topographic tolerance/exception)
X Other agency review (DFWP, federal agencies, DSL)
__ Screening/fencing of pits, drillsite
__ Other: _____

Comments: Private surface lands. State Trust Lands minerals. Trust Lands will do surface EA.

_____
_____

**Historical/Cultural/Paleontological**

(possible concerns)

Proximity to known sites: None identified.

Mitigation

__ avoidance (topographic tolerance, location exception)

_X other agency review (SHPO, DSL, federal agencies)

__ Other: _____

Comments: Private lands at this location. State Trust Lands minerals. Trust Lands will do surface EA.

**Social/Economic**

(possible concerns)

__ Substantial effect on tax base

__ Create demand for new governmental services

__ Population increase or relocation

Comments: Well is a wildcat well and may not be productive. No concerns.

**Remarks or Special Concerns for this site**

14,399'MD/10,473 'TVD.single lateral horizontal Bakken formation well.

**Summary: Evaluation of Impacts and Cumulative effects**

No long term impacts expected, only some short term impacts will occur.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/Steven Sasaki

(title:) Chief Field Inspector

Date: May 13, 2010

Other Persons Contacted:

(Name and Agency)

Montana Bureau of Mines and Geology, Groundwater Information Center website.

(subject discussed)

Water wells in Roosevelt County

(date)

May 13, 2010

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Roosevelt County, Montana
(subject discussed)

May 13, 2010

If location was inspected before permit approval:
Inspection date: _____
Inspector: Robert Schmidt_____
Others present during inspection: None_____